

Case Study

Joe Maas

Vice President, JTM Food Group
Harrison, OH

Minimizing Energy Use and Improving Efficiency

Since the late 1960's, when J.T.M. Food Group first operated as a modest retail meat shop in Cincinnati, the company has grown exponentially into a prominent meat processor.

J.T.M. Food Group's switch from manual cold storage warehousing to an automated storage and retrieval system improved inventory and order fulfillment accuracy to over 99 percent, reduced warehouse labor by 75 percent, eliminated product and warehouse damage, and cut energy usage by 66 percent.



The challenge

Cold storage warehouses pose definite challenges to operations and logistics managers who endeavor to have facilities operating at a high level of efficiency. Compared to non-freezer facilities, cold storage warehouses have a higher incidence of product damage, missed product rotation, wrong item fulfillment. Not surprisingly, personnel turnover in cold storage facilities is also higher than in nonfreezer warehouses.

Our solution

JTM selected Dematic Corp. to design and build the storage retrieval system, including control software, racking and associated conveying equipment.

Dematic designed the system with a unique double-load remote pallet handling device which can carry two pallets at a time, instead of the classic ASRS machine that typically handles one pallet at a time. When JTM's storage retrieval machine picks up loads that are coming out of manufacturing it loads up two pallets at a time and then puts away two pallets at a time, which decreases the cycle time of the machine and increases throughput.

When the pallet is on the load handling device it is carried off the ASRS machine into the rack. It performs a function called deep lane storage. When that ASRS machine runs up and down the aisle, on one side it can handle four-deep pallet storage lanes, and on the other side it can handle eight pallet-deep storage lanes. A conventional ASRS machine only goes one-, two- or three-pallets deep, using a fork attached to the machine, because that is the maximum it can reach. But with the Dematic drive-off remote, it can run a pallet 30 feet off into the eight-deep side and drop it into storage, and then return back to the ASRS machine.

"Our inventory is always correct. Inventory issues were abounding before. The ASRS always gets the correct item number, and it always rotates the product properly."

Joe Maas, Vice President,
JTM Food Group



Dematic also integrated StagingDirector™, for inventory management and pallet movement with the ASRS, part of the Dematic WCS (Warehouse Control System) IT Suite. When JTM gives StagingDirector an order, it knows where it stored that palletized SKU, goes in and gets it, and brings it out to a workstation. JTM personnel then pick off the cases they need to fulfill the order, the pallet goes back into the system, and it knows where it put it again. It knows how many cases are left on that pallet after they pick the cases off. This information then ties in with JTM's order management system. StagingDirector has visualization screens that give JTM the ability to immediately look into what level of inventory they have in their facility.

Results

The ASRS eliminated the excess air exchange in and out of the freezer, making it more efficient and reducing energy costs. JTM also lost all of the cost associated with the maintenance of fork lifts, and the labor and travel time associated with physically operating them. Now, JTM's order pickers are more efficient and more productive, they simply push a button and out comes the SKUs they need, and they just pick right to the order pallet.

"My refrigeration engineer shakes his head every time we look at the freezer," explains Maas. "It uses one-third of the refrigeration we felt it was going to need based on our prior experience with non-ASRS freezers that would hold 10,000 pallets, and based on everything we knew prior. We originally built in two compressors, but only one of them ever comes on because the other is not needed."

JTM built the freezer big enough so it could rent out the additional space until it needed it, so, the company does third-party retail logistics work out of its freezer. It has all of its product, as well as other company's product in its freezer. It has made it much more affordable for a smaller company like JTM to take advantage of this level of automation.

Another benefit of the ASRS is the security of the product in the freezer. "Our level of security is incredible," continues Maas. "Since no one goes in the freezer, the products are more secure from pilferage and tampering."

The product and the infrastructure in the freezer is safer as well. "Zero product damage, zero rack damage," continues Maas. "Our inventory is always correct. Inventory issues were abounding before. The ASRS always gets the correct item number, and it

always rotates the product properly. Our order fulfillment was always in the mid- to high-90th percent range, but now it has gone to over 99 percent since we put the ASRS in place."

Customer benefits

- Improved order fulfillment accuracy over 99% percent
- 70% Reduction in Building Footprint
- 66% Less Energy Costs
- Doubled Worker Productivity
- Eliminated product and warehouse damage